Figure 3.

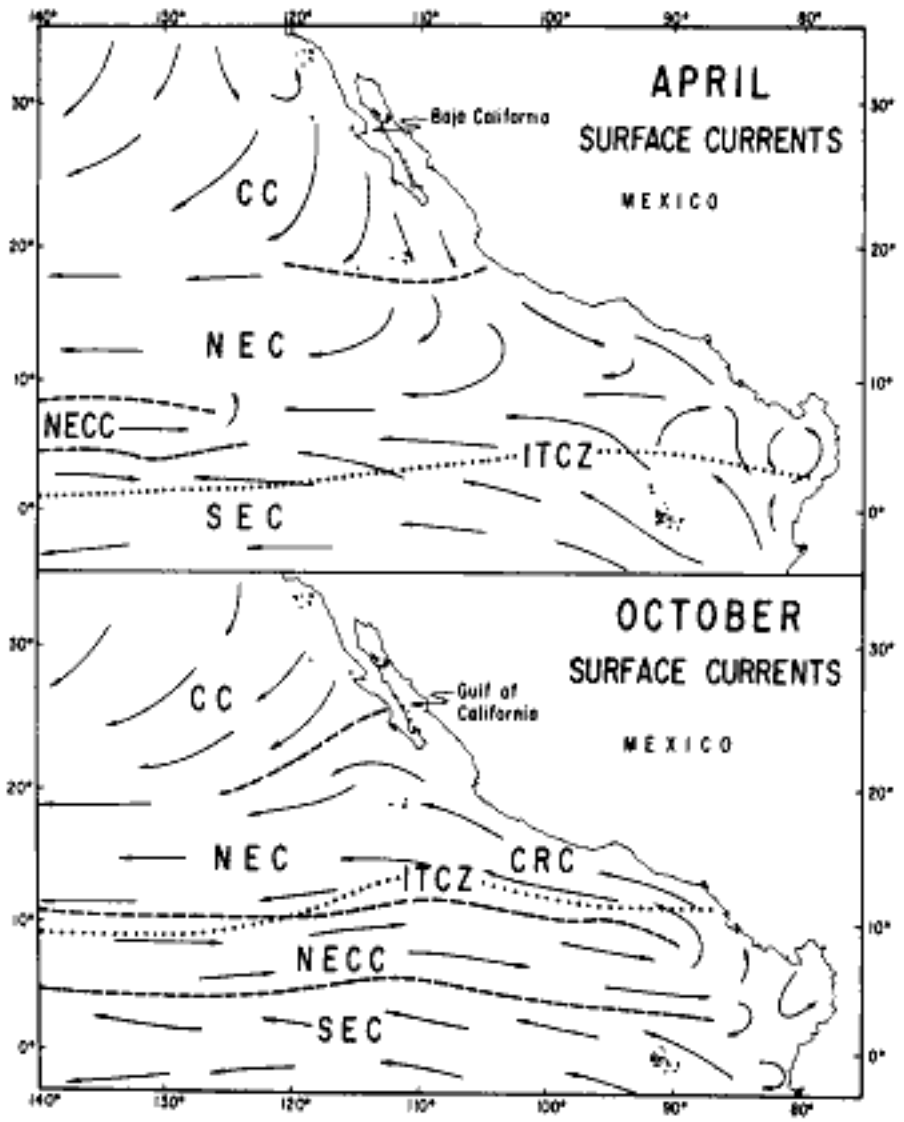

Figure 3. Annual cycle surface circulation based on ship-drift records (after Baumgartner & Christensen, 1985, which was adapted from Wyrtki, 1965). Current abbreviations are: California Current (CC), North Equatorial Current (NEC), North Equatorial Countercurrent (NECC), South Equatorial Current (SEC) and Costa Rica Coastal Current (CRCC). The Intertropical Convergence Zone (ITCZ) is marked by a dotted line. The dashed lines around the NECC show its changing extent.

Figure 4.

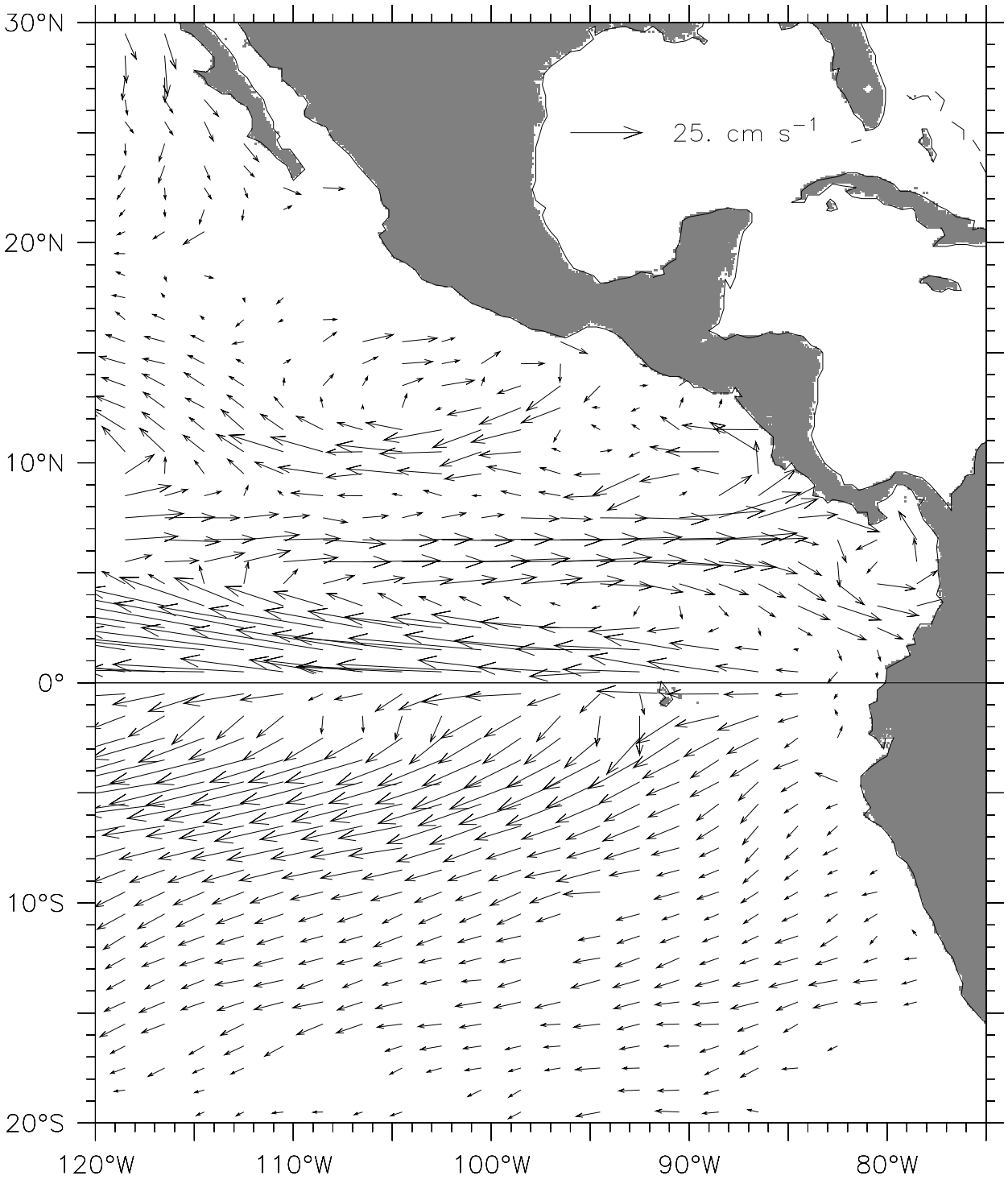

Figure 4. Mean surface circulation from surface drifters. Vectors were left blank if either the total count of samples in that 1° by 1° box was less than 10, or if fewer than 4 months of the year were represented. The scale vector is located in the Gulf of Mexico.

Figure 5.

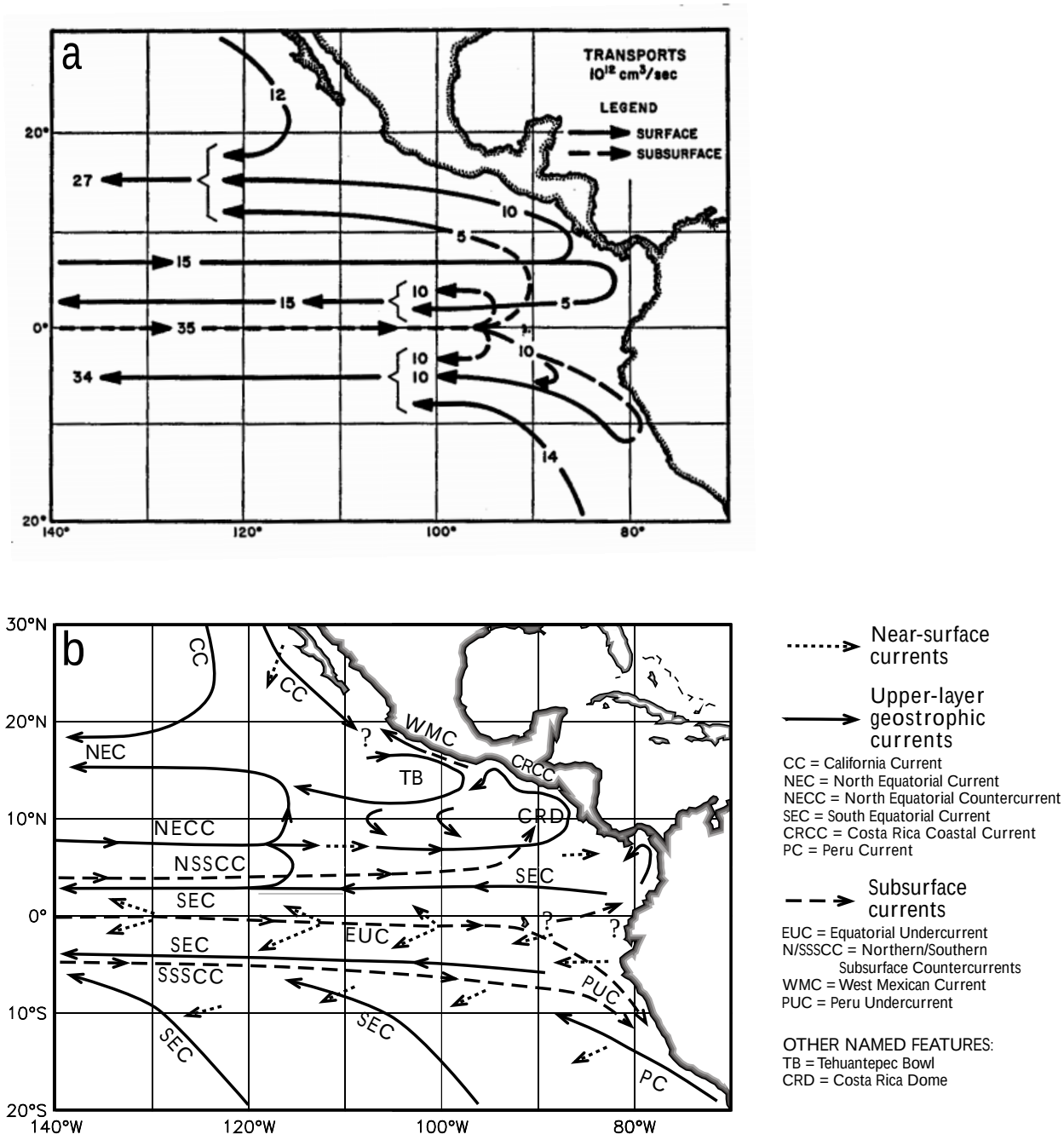

Figure 5. Schematic three-dimensional circulation in the eastern tropical Pacific. a) After Wyrtki (1966). b) The circulation based on modern data. The legend at the right lists the names of currents and features referred to in the text. Several question marks indicate regions where the interconnections among the currents remain unknown (see text).

Figure 8.

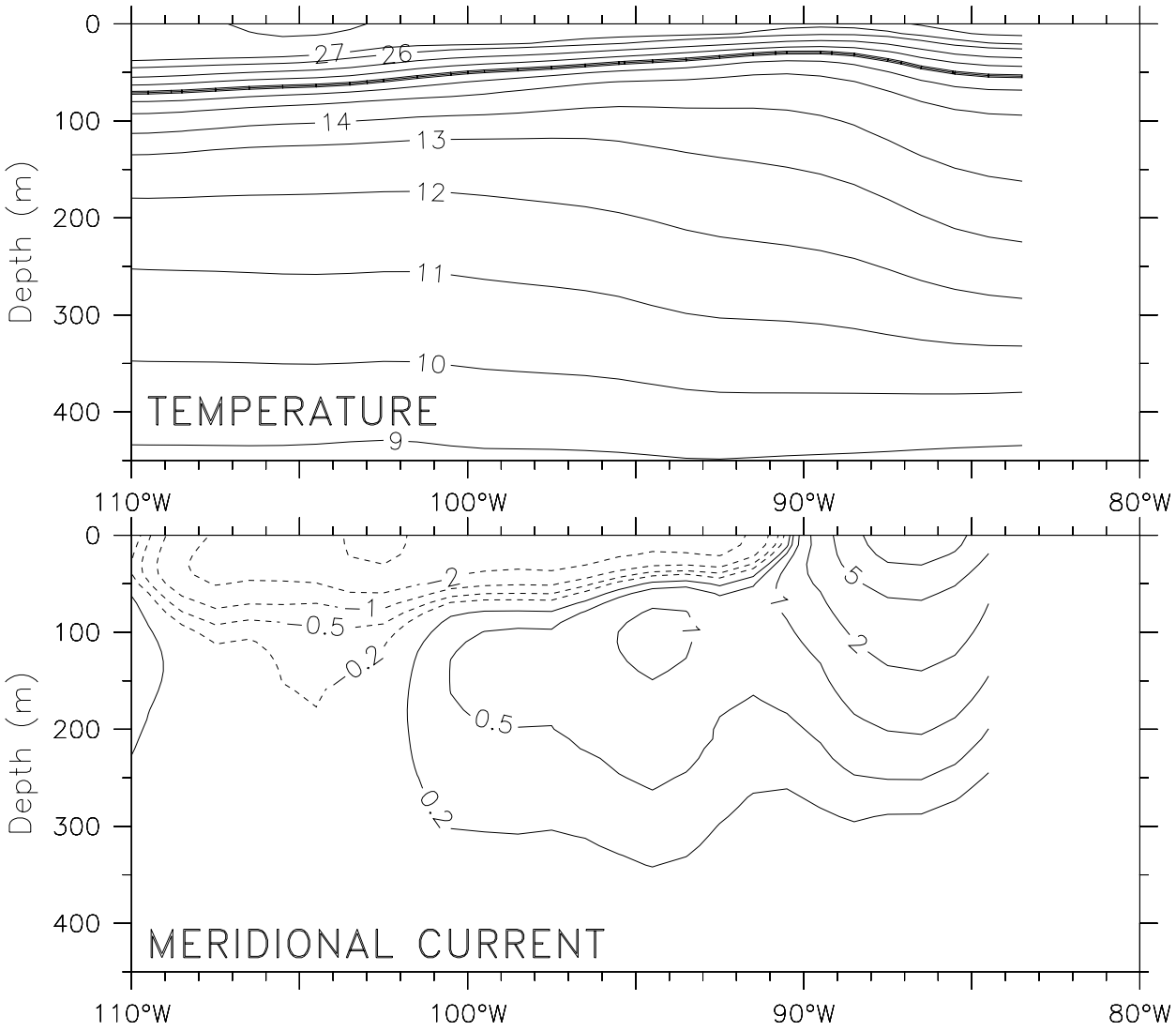

Figure 8. Zonal sections of temperature (top) and meridional geostrophic current (bottom) along 8.5°N, from the coast (right edge) to 110°W. The contour interval for temperature is 1°C from 8°C to 14°C, then 2°C from 16°C to 26°C, then 1°C from 27°C to 29°C; the 20°C contour is darkened. In the bottom panel, northward current is indicated by solid contours, southward by dashed contours; the contour interval is every 5 $cm\,s^{-1}$ within ±15 $cm\,s^{-1}$, with additional contours at ±1 and 2 $cm\,s^{-1}$, ±0.5 $cm\,s^{-1}$ and ±0.2 $cm\,s^{-1}$.

Figure 10.

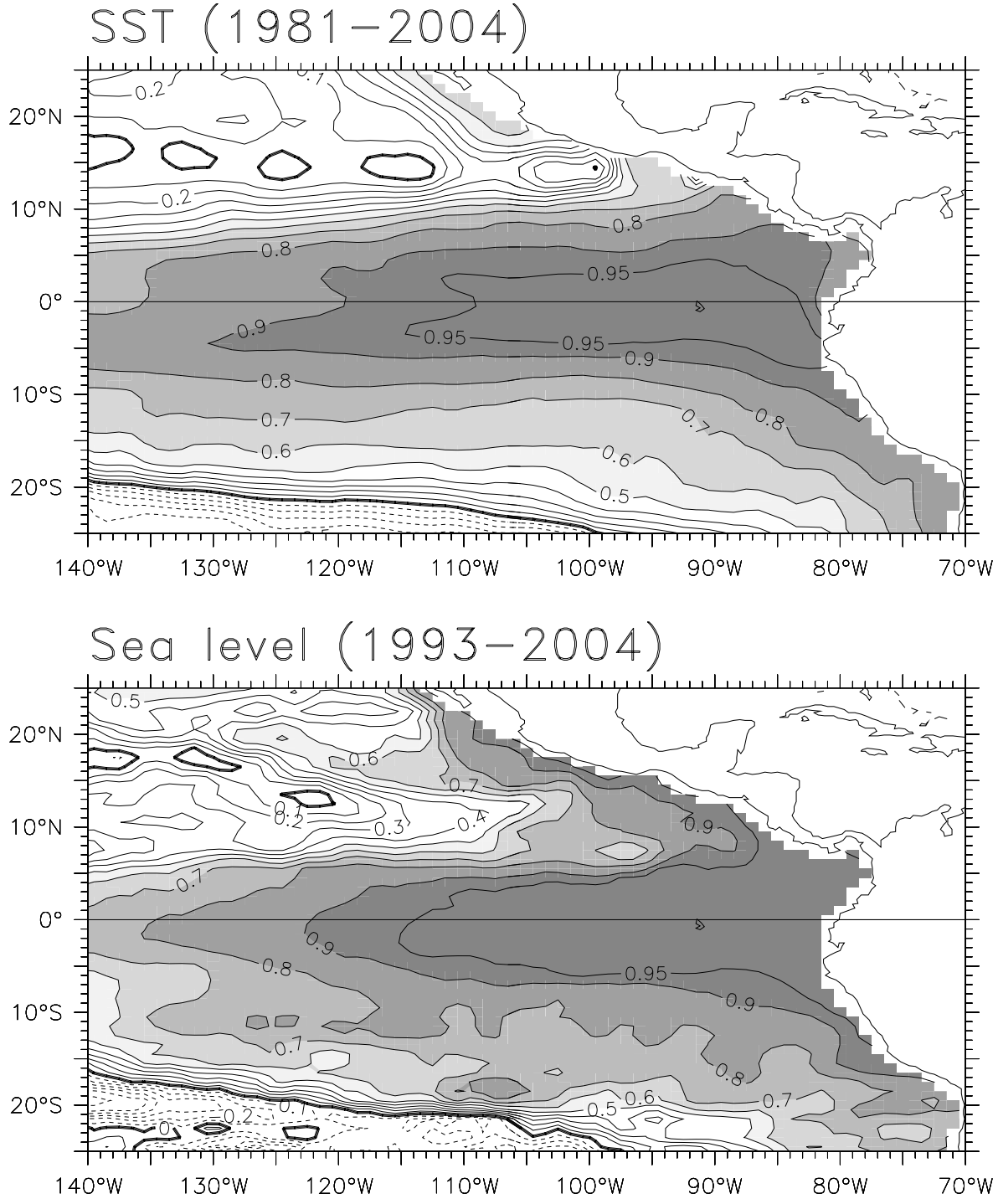

Figure 10. Correlations of interannually-smoothed quantities with themselves at 0°, 95°W. Top: SST from the Reynolds SST product (1981-2004). Bottom: sea level from the Topex/Jason altimeter (1993-2004). Interannual smoothing of demeaning by the average annual cycle, then smoothing with an 11-month running mean.